

METHOD FOR FORMING A TOP OXIDE WITH NITRIDE LINER

Abstract of the Disclosure

5 A method for forming a top oxide for a deep trench memory device comprising a poly stud above a polysilicon fill in a deep trench and an isolation region in a portion of the deep trench, comprises forming an etch support nitride liner by low-pressure chemical vapor deposition over the poly stud, and forming a support polysilicon over a portion of the isolation trench
10 outside of an array. The method further comprises depositing a top oxide over the deep trench memory device, forming a planarization coating over the top oxide, and opening the nitride stud, wherein the top oxide remains over a portion of the isolation trench.